

Claims

1. A recording medium having recorded thereon one or more digital streams each generated by multiplexing a video stream and a graphics stream, wherein

the video stream constitutes a moving picture,

the graphics stream constitutes graphics to be overlaid on the moving picture, and includes status information, and

if the digital stream is to be played back by a reproduction device immediately following another digital stream, the status information indicates that presence of management data already in memory for graphics display is to be continuous.

2. The recording medium of Claim 1 further having recorded thereon playback path information that indicates a playback path for each digital stream, wherein

the playback path information includes a seamless flag that indicates whether or not moving picture playback is to be seamless at a boundary between the digital stream and the other digital stream,

20 and

the indication by the status information is permitted only if the moving picture playback is to be seamless.

3. The recording medium of Claim 1, wherein

25 the status information includes a count number that shows a number of times that graphics have been displayed.

4. The recording medium of Claim 3, wherein

the indication of continued presence is permitted only if the count number in the status information matches a last count number in the other digital stream.

5       5. The recording medium of Claim 1, wherein  
          the status information is contained in at least one packet,  
          the display timing of the graphics is shown by a time stamp  
          that is included in the packet, and  
          a value of the time stamp is obtained by adding a predetermined  
10      offset to a display timing of a last picture in a video stream in  
          the other digital stream.

15      6. A reproduction device for playing back a plurality of digital  
          streams each generated by multiplexing a graphics stream and a video  
          stream, the reproduction device comprising:

          a video decoder operable to decode each video stream to obtain  
          a moving picture; and  
          a graphics decoder operable to decode each graphics stream  
          to obtain graphics that are to be overlaid on a corresponding moving  
20      picture, wherein

          each graphics stream includes status information,  
          the graphics decoder includes memory and a controller,  
          the memory stores management data for the presentation of the  
          graphics, and  
25      if playback of the digital stream is to seamlessly follow  
          playback of another digital stream, the controller judges whether  
          or not the status information included in the graphics stream of  
          the digital stream is of a predetermined type, and if judging

affirmatively, causes the presence of management data in the memory to be continuous.

7. The reproduction device of Claim 6, wherein

5 even when the status information is of the predetermined type, the controller resets the memory in the graphics decoder (i) if playback of the digital stream is not to immediately follow playback of the other stream, (ii) if playback is to start from midway through the digital stream, or (iii) if playback of the digital stream and the  
10 other digital stream is non-seamless.

8. The reproduction device of Claim 6, wherein

status information in each graphics stream includes a count number that shows a number times graphics have been displayed during  
15 digital stream playback, and

the continued presence indicated by the status information in the graphics decoder is permitted only when the count information of the digital stream matches count information for last graphics in the other digital stream.

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9. The reproduction device of Claim 6, wherein

the plurality of digital stream is recorded on a recording medium together with playback path information that indicates a playback path for each digital stream,

25 the playback path information includes a seamless flag that indicates whether or not moving picture playback is to be seamless at a boundary between the digital stream and the other digital stream, and

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the indication by the status information is permitted only if the moving picture playback is to be seamless.

10. A program for causing a computer to play back a plurality 5 of digital streams each generated by multiplexing a graphics stream and a video stream, the program comprising steps of:

decoding each video stream to obtain a moving picture; and decoding each graphics stream to obtain graphics that are to be overlaid on a corresponding moving picture, wherein

10 each graphics stream includes status information, and if playback of the digital stream is to seamlessly follow playback of another digital stream, the step to obtain the graphics causes the computer to judge whether or not the status information included in the graphics stream of the digital stream is of a 15 predetermined type, and if judging affirmatively, causes the presence of management data in memory in the computer to be continuous.

11. A method for playing back a plurality of digital streams each generated by multiplexing a graphics stream and a video stream, 20 the program comprising steps of:

decoding each video stream to obtain a moving picture; and decoding each graphics stream to obtain graphics that are to be overlaid on a corresponding moving picture, wherein

each graphics stream includes status information, and 25 if playback of the digital stream is to seamlessly follow playback of another digital stream, the step to obtain the graphics judges whether or not the status information included in the graphics stream of the digital stream is of a predetermined type, and if judging

affirmatively, causes the presence of management data in memory in a computer to be continuous.